IN THE CLAIMS:

Please cancel claim 28 and 39.

Please amend the following claims:

37. (Amended) A method of exposing a resist on a substrate comprising the steps of:

a) providing the substrate with a film of resist;

b) placing the substrate on a stage;

c) providing x-ray radiation from a point source;

d) collimating or concentrating said x-ray radiation;

e) providing a mask for defining exposure of said resist;

f) illuminating said mask with said x-ray radiation after said collimating or concentrating step (d); and

g) exposing said resist with x-ray radiation passing through said mask.

44. (Amended) The method as recited in claim 43, wherein said displacement sensor comprises a differential variable reluctance transducer (DVRT).

45. (Amended) The method as recited in claim 43, further comprising the step of using output of said displacement sensor to control said exposing step.

46. (Amended) The method as recited in claim 45, wherein said mask is positioned with respect to said substrate, said method further comprising the step of exposing said resist at a time when said displacement sensor output indicates that position of said mask with respect to said substrate is optimum.

47. (Amended) The method as recited in claim 45, wherein said mask is spaced from said substrate by a gap, said method further comprising the step of exposing said resist at a time when said displacement sensor output indicates that said gap is optimum.

48. (Amended) The method as recited in claim 43, further comprising the step of using [said] displacement sensor output to control mask to wafer misalignment.

49. (Amended) The method as recited in claim 43, further comprising the step of using [said] displacement sensor output to control substrate x, y, z, rotation, and magnification.

50. (Amended) The method as recited in claim 37, wherein said x-ray radiation passes through a beam transport chamber having helium or other low attenuation gas at atmospheric pressure or at lower pressure.